



NOTES

10'

SECTION A-A

- 1. MANHOLES SHALL BE CONSRUCTED IN ACCORDANCE WITH AASHTO M 199.
- 2. CONCRETE SHALL BE MIX NO.6 (4500 PSI).
- 3. WALL REINFORCEMENT FOR BASE UNITS. RISER UNITS AND ECCENTRICAL CONE UNITS SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.33 IN²/FT AND MAXIMUM SPACING OF 6" FOR THE 120" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 52. REINFORCEMENT SHALL MEET ASTM A 615. GRADE 60.
- 4. BASE REINFORCEMENT SHALL BE REINFORCEMENT BARS OR WELDED WIRE WIRE FABRIC WITH A MINIMUM AREA OF 0.42 IN²/FT AND A MAXIMUM SPACING OF 6" WITH 2" COVER FROM THE TOP OF BASE. THE BASE SHALL BE CAST MONOLITHIC WITH THE UNIT OR JOINTED PER THE MANUFACTURER'S DESIGN.
- 5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING (WHERE APPLICABLE) MORTAR. RUBBER O-RING GASKETS MEETING ASTM C 361 & C 443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198 TYPE B.
- 6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-4" MAXIMUM C/C. RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARDS MD 383.91 OR MD 383.92. LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
- 7. WHEN THE DISTANCE BETWEEN MULTIPLE OPENINGS IN THE BASE UNIT OR ANY RISER UNIT IS LESS THAN 6" ADDITIONAL NO.3 BARS ARE REQUIRED AROUND OPENINGS.
- 8. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
- 9. MIX NO.2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
- 10. THE DRIP STONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD. MD 384.13 FOR DETAILS.
- 11.MINIMUM DEPTH PAYMENT PER EACH SHALL BE 10'-7" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 10'-7". THE COST OF THE DRIP STONE LANDING. NO.57 AGGREGATE. GROUT. SEALANT. AND ALL APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.
- 12. MANHOLE HAS BEEN DESIGNED FOR HS-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

SPECIFICATION CATEGORY CODE ITEMS 305 a K **APPROVED** DIRECTOR - OFFICE OF HIS WAY DEVELOPMENT APPROVAL . SHA APPROVAL . FEDERAL REVISIONS HIGHWAY ADMINISTRATION APPROVAL 2-22-91 APPROVAL 10-7-14 REVISED REVISED 9-29-14 REVISED REVISED REVISED

Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

120" DIAMETER PRECAST MANHOLE FOR 78" TO 84" PIPES

STANDARD NO. MD 384.11